

REMARKS/ARGUMENTS

This Amendment is being filed in response to the Office Action dated March 3, 2009. Reconsideration and allowance of the application in view of the amendments made above and the remarks to follow are respectfully requested.

Claims 1 and 7-17 are pending in the Application.

In the Office Action, claims 1 and 7-17 are rejected under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement due to "Claim 1, lines 8-9 recite 'wherein the control unit is designed, during a jump operation, to continuously generate said control signal S_{CL} '." It is alleged that since "Applicant discloses on page 11, lines 32-33 'during a jump, the control unit 90 uses the information in said shape memory 310 when generating said actuator drive signal SCL.'" It is alleged in the Office Action that "[t]he claim recitation and applicant's disclosure are not the same." This rejection of claims 1 and 7-17 is respectfully traversed. It is respectfully submitted that claims 1 and 7-17 clearly satisfy the written description requirement. As clearly shown in FIG. 8 of the present application wherein the shape memory 310 is shown, the output from said shape memory 310 (S_{CRC}) is subtracted from the actuator deviation signal

S_{AS} (the difference between actuator position (XA) and sledge position (XS) irrespective of a position of the lens actuator as recited in the claims, e.g., see, page 7, lines 14-21) by the compensating repetitive control subtractor 302.

As should be clear, just because in one embodiment of the present system, during a jump, the control unit 90 uses the information in said shape memory 310, it is respectfully submitted that as clear to a person of ordinary skill in the art, the shape memory is used in addition to the actuator deviation signal S_{AS} and not in place of it.

Accordingly, it is respectfully submitted that claims 1 and 7-17 clearly comply with the written description requirement. Accordingly, it is respectfully requested that this rejection under 35 U.S.C. §112, first paragraph, be withdrawn.

In the Office Action, claims 1, 7, 13 and 17 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,442,604 to Osada ("Osada") in view of U.S. Patent No. 5,157,642 to Tsukamura ("Tsukamura"). Claims 8-10 and 12 are rejected under 35 U.S.C. §103(a) over Osada in view of Tsukamura in further view of European Patent Application No. 0862169 to Tomonori ("Tomonori"). Claim 11 is rejected under 35 U.S.C. §103(a) over Osada in view of Tsukamura

in further view of Tomonori and U.S. Patent No. 5,539,710 to Tokushuki ("Tokushuki"). Claims 14-16 are rejected under 35 U.S.C. §103(a) over Osada in view of Tsukamura in further view of European Patent Application No. 0938038 to Fukue ("Fukue") and Tomonori.

In addition, claims 1, 7, 13 and 17 are rejected under 35 U.S.C. §103(a) over Osada in view of Tsukamura and U.S. Patent No. 5,872,676 to Smith ("Smith"). Claims 8-10 and 12 are rejected under 35 U.S.C. §103(a) over Osada in view of Tsukamura and Smith in further view of Tomonori. Claim 11 is rejected under 35 U.S.C. §103(a) over Osada in view of Tsukamura in further view of Tomonori and Smith and Tokushuki. Claims 14-16 are rejected under 35 U.S.C. §103(a) over Osada in view of Tsukamura and Smith in further view of Fukue.

These rejections of claims 1 and 7-17 are respectfully traversed. It is respectfully submitted that claims 1 and 7-17 are allowable over Osada in view of Tsukamura alone and in view of any combination of Smith, Tomonori, Tokushuki and Fukue for at least the following reasons.

As a first point, it is undisputed that "Osada in view of Tsukamura does not teach the control unit that is designed, during a jump operation to continuously generate said control signal S_{CL} ."

(See, Office Action, page 18.) Accordingly, clearly each of the rejections of the claims noted above that do not include Smith, are admitted by the Office Action as deficient for an obviousness rejection and should be withdrawn.

Smith shows a method of positioning a dual element magnetoresistive (MR) head relative to a storage medium in a storage device (see, Smith, abstract). Smith uses a PES signal that shows an inflection point that corresponds approximately to the edges of the track 50 that is used for counting tracks during seek operations (see, Smith, FIG. 7, cited in the Office Action and Col. 6, line 66 through Col. 7, line 7.) It is the PES signal 215 that is provided to controller 250 which outputs a control signal 251 in response to the PES signal 215 and the operating mode, for example track seek, settle or follow. The control signal 251 is provided to a driver 206, which converts the control signal 251 to an analog signal and generates a continuous current for the voice coil motor 39 to move the actuator. (See, Smith, Col. 8, lines 12-18 cited in the Office Action.)

However, it is respectfully submitted that it is just such a track counting mechanism with its inherent problems during a jump operation that the present system is directed at solving. As

stated in the present application, "[i]n the prior art, damping is effected only with reference to the disc. To this end, the photo-detector output signal is analyzed to derive information with respect to track-crossings, and the number of tracks crossed per unit time is monitored. This information is compared with the sledge control signal, and deviations are counter-acted by the actuator." "This type of control requires a calculating step, wherein the number of track-crossings as counted is compared with the number of track-crossings as expected. Further, in cases where the track crossing signal is absent, or contains relatively much noise, it may be difficult to achieve reliable and robust control on the basis of counting track-crossings alone. For instance, if the track crossing signal contains a lot of noise, it may happen that erroneous track crossings are detected." (See, present application, page 3, lines 5-14.)

As stated in the present application, "[a]n important objective of the present invention is to provide an improved actuator control which allows faster access, especially in cases with an unreliable or noisy track crossing signal." (See, present application, page 3, lines 15-17.)

Tsukamura appreciates this same problem and identifies during a high speed access caused by a jump operation, the control signal for the lens actuator is held to zero and is not based on an actuator deviation signal representing a difference between the actuator position and the sledge position (see, Tsukamura; col. 4, lines 32-58; col. 5, lines 15-22 and 48-65).

It is respectfully submitted that if Osada in view of Tsukamura where modified by Smith without a benefit of hindsight gained by the present application, one would still have the lens actuator held to zero during a jump operation. Accordingly, even if Smith generates a continuous current for the voice coil motor 39, this signal would not be received by the lens actuator since Tsukamura makes clear that it is desirable to have the lens actuator held to zero during a jump operation.

It is respectfully submitted that the apparatus of claim 1 is not anticipated or made obvious by the teachings of Osada in view of Tsukamura and Smith. For example, Osada in view of Tsukamura and Smith does not disclose or suggest, an apparatus that amongst other patentable elements, comprises (illustrative emphasis provided) "a control unit for generating a control signal (SCL) received by the lens actuator; wherein the control unit is

designed, during a jump operation, to continuously generate said control signal (SCL) for the lens actuator at least partly on the basis of an actuator deviation signal (SAS) representing a difference between actuator position (XA) and sledge position (XS) irrespective of a position of the lens actuator with respect to an optical disk" as recited in claim 1, and as similarly recited in claim 17.

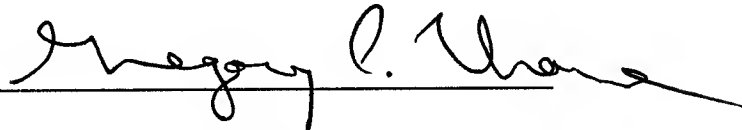
Based on the foregoing, the Applicant respectfully submits that independent claims 1 and 17 are patentable over Osada in view of Tsukamura and Smith and notice to this effect is earnestly solicited. Claims 7-16 depend from claim 1 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicant denies any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicant reserves the right to submit further arguments in support of the above stated position,

should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicant has made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

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June 2, 2009

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